

Claims

1. A method for the treatment of an individual having a condition characterised by abnormal myocardial cell Na^+ , K^+ or Ca^{2+} ion levels, said method comprising administering a therapeutically effective amount of one or more β_3 adrenoceptor agonists to said individual.

2. The method according to claim 1 wherein the condition is selected from the group consisting of heart failure, and myocardial hypertrophy.

3. A method for the treatment of an individual suffering from or susceptible to heart failure or myocardial hypertrophy, said method comprising administering a therapeutically effective amount of one or more β_3 adrenoceptor agonists to said individual.

4. The method according to claim 3 wherein the individual is an individual having one or more clinical symptoms of heart failure or myocardial hypertrophy.

5. The method according to claim 3 wherein the β_3 adrenoceptor agonist is selected from the group consisting of aryloethanolamines, aryloxypropanolamines, trimetoquinols.

6. The method according to claim 3 wherein the β_3 adrenoceptor agonist is selected from the group consisting of BRL37344, BRL 35135, BRL 26830, BRL 26830A, BRL 35113, ZD7114, CGP12177, CGP 12177A, CGP-20712A, CL316243, ICI07114, ICI215001, ICI 201651, BRL35135A, BRL28410, N-5984, (R)-N-[4-[2-[[2-Hydroxy-2-(pyridin-3-yl)ethyl]amino]ethyl]phenyl]-4-[4-(4-trifluoro-methylphenyl)thiazol-2-yl]benzenesulfonamide (L-796568), (R)-N-[4-[2-[[2-hydroxy-2-(3-pyridinyl)-ethyl]amino]ethyl]phenyl]-1-(4-octylthiazol-2-yl)-5-indolinesulfonamide (L-755507), L-770,644, L-766,892, L-757,793, L-796568, LY-377604, Ro 40-2148, SB-220646, SB-226552, SB-251023, SB-262552, SR 58306, SR 58375, SR 58339, SR 58611, SR 58611A, SR 59119A, GR-265261-X, AD-9677, and agonists of the series 2-(3-indolyl)alkylamino-1-(3-chlorophenyl)ethanols.

7. The method according to claim 3 wherein the β_3 adrenoceptor agonist is BRL37344.

8. The method according to claim 3 wherein the β_3 adrenoceptor agonist further comprises β_1 antagonist activity and or further comprises β_2 antagonist activity.

9. The method according to claim 3 further comprising administering one or more β blockers to said individual.

10. The method according to claim 9 wherein the β blocker is nadolol.

11. The method according to claim 9 wherein the β blocker is a β_1 and/or β_2 adrenoceptor antagonist.

12. The method according to claim 9 wherein the β blocker is administered to said individual prior to, simultaneously with or subsequent to administration of the one or
5 more β_3 adrenoceptor agonists.

13. The method according to claim 3 further comprising at least partially stabilizing said individual prior to administration of said β_3 adrenoceptor agonist.

14. The method according to claim 13 wherein said stabilizing comprises treatment with one or more compounds selected from the group consisting of ACE-
10 inhibitors, aldosterone antagonists and β adrenoceptor antagonists.

15. A method for treatment of a condition characterised by abnormally high myocardial cell Na^+ ion level, said method comprising administration to an individual having said condition of a therapeutically effective amount of one or more β_3 adrenoceptor agonists.

16. The method according to claim 15 wherein said condition characterised by
15 abnormally high myocardial cell Na^+ ion level is selected from the group consisting of heart failure, myocardial hypertrophy, and diabetic cardiomyopathy.

17. Use of one or more β_3 adrenoceptor agonists for the manufacture of a medicament for treatment of an individual having a condition characterised by abnormal
20 myocardial cell Na^+ , K^+ or Ca^{2+} ion levels.

18. One or more β_3 adrenoceptor agonists for use in the treatment of an individual having a condition characterised by abnormal myocardial cell Na^+ , K^+ or Ca^{2+} ion levels.

19. Use of one or more β_3 adrenoceptor agonists for the manufacture of a medicament for treatment of an individual suffering from or susceptible to heart failure or
25 myocardial hypertrophy.

20. One or more β_3 adrenoceptor agonists for use in the treatment of an individual suffering from or susceptible to heart failure or myocardial hypertrophy.

21. A pharmaceutical composition for use in the treatment of an individual having a condition characterised by abnormal myocardial cell Na^+ , K^+ or Ca^{2+} ion levels, the
30 composition comprising one or more β_3 adrenoceptor agonists together with one or more pharmaceutically acceptable adjuvants, excipients and/or carriers.

22. A pharmaceutical composition for use in the treatment of an individual suffering from or susceptible to heart failure or myocardial hypertrophy, the composition comprising one or more β_3 adrenoceptor agonists together with one or more
35 pharmaceutically acceptable adjuvants, excipients and/or carriers.

23. A pharmaceutical composition comprising one or more β_3 adrenoceptor agonists and one or more β_1 and/or β_2 adrenoceptor antagonists, together with one or more pharmaceutically acceptable adjuvants, excipients and/or carriers.

24. A method for the extrusion of Na^+ from a myocardial cell or cells, the method
5 comprising contacting said cell(s) with one or more β_3 adrenoceptor agonist(s).

25. The method according to claim 24 wherein said method comprises Na,K pump stimulation.